IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (previously presented) A method for improved inter-domain routing convergence, comprising:

transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw.

2. (original) The method of claim 1, wherein said reason information is transmitted along with said route update or withdraw.

3. (original) The method of claim 2, wherein said reason information is encoded as a triplet within a route update or withdraw message.

4. (original) The method of claim 3, wherein said triplet comprises:

a type code identifying the reason for the update or withdraw;

an indication of a node pair associated with the update or withdraw; and

an updated cost of a link between the node pair associated with the update or withdraw.

5. (original) The method of claim 1, wherein said reason information comprises reasons selected from the group consisting of a loss of peering between nodes and a change in a cost of a link between nodes.

6. (previously presented) The method of claim 1, wherein a node receiving said reason information uses said reason information to determine which of its candidate routes are also affected by the same event that triggered the initial route update or withdraw and which of its candidate routes are not affected.

7. (original) The method of claim 6, wherein a candidate route is considered as a transient route if said receiving node determines from said reason information that said candidate route is to be updated or withdrawn.

8. (original) The method of claim 7, wherein said receiving node avoids advertising a candidate route considered as a transient route as a preferred route to its neighbors.

9. (original) The method of claim 7, wherein a route previously considered as transient is considered as stable if the route is not updated within a predetermined time period.

10. (original) The method of claim 1, further comprising transmitting version information for the route update or withdraw.

11. (original) The method of claim 10, wherein said version information comprises a version of the update or withdraw for each node pair and the change in node pairs from a route previously advertised.

12. (original) The method of claim 10, wherein a node receiving said version information uses said version information to determine the stability of its candidate routes.

13. (original) The method of claim 12, wherein a candidate route is considered as a transient route if a reason's version is greater than the version of a corresponding node pair in a path of the candidate route being considered.

14. (original) The method of claim 13, wherein said receiving node avoids advertising a candidate route considered as a transient route as a preferred route to its neighbors.

15. (previously presented) An apparatus for improved inter-domain routing convergence, comprising:

means for identifying reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw; and

means for transmitting the reason information to neighboring apparatuses.

16. (previously presented) The apparatus of claim 15, further comprising:

means for receiving reason information associated with a received update or withdraw; and

means for using said received reason information to determine which of its candidate routes are also affected by the same event that triggered an initial route update or withdraw and which of its candidate routes are not affected.

17. (original) The apparatus of claim 16, wherein a candidate route is considered as a transient route if said apparatus determines from said received reason information that said candidate route is to be updated or withdrawn.

18. (original) The apparatus of claim 17, wherein said apparatus avoids advertising a candidate route considered as a transient route as a preferred route to its neighbors.

19. (previously presented) The apparatus of claim 15, further comprising:

means for transmitting version information for the route update or withdraw.

20. (previously presented) The apparatus of claim 19, further comprising:

means for receiving version information with an update or withdraw; and

means for using said received version information to determine the stability of its candidate routes.

21. (original) The apparatus of claim 20, wherein a candidate route is considered as a transient route if said apparatus determines from said received version information that a reason's version is greater than the version of a corresponding node pair in a path of the candidate route being considered.

22. (original) The apparatus of claim 21, wherein said apparatus avoids advertising a candidate route considered as a transient route as a preferred route to its neighbors.

23. (previously presented) A communications network having improved inter-domain routing convergence, comprising:

a plurality of network devices, each of said network devices comprising a processor and a memory, wherein said network devices perform the steps of:

transmitting reason information associated with a route update or withdraw to neighboring devices, wherein the reason information comprises a reason for the route update or withdraw;

receiving reason information associated with a received update or withdraw; and

using said received reason information to determine which of its candidate routes are also affected by the same event that triggered an initial route update or withdraw and which of its candidate routes are not affected.

24. (original) The communications network of claim 23, wherein a candidate route is considered as a transient route if a network device determines from said received reason information that said candidate route is to be updated or withdrawn.

25. (original) The communications network of claim 24, wherein said network devices avoid advertising a candidate route considered as a transient route as a preferred route to its neighbors.

26. (previously presented) A computer-readable medium for storing a set of instructions, wherein when said set of instructions is executed by a processor perform a method comprising:

transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw.

27. (previously presented) The computer-readable medium of claim 26, wherein said method further comprises:

receiving reason information associated with a received update or withdraw; and

using said received reason information to determine which of its candidate routes are also affected by the same event that triggered the initial route update or withdraw and which of its candidate routes are not affected.

28. (original) The computer-readable medium of claim 27, wherein a candidate route is considered as a transient route if it is determined from said received reason information that said candidate route is to be updated or withdrawn.

29. (original) The computer-readable medium of claim 28, wherein a candidate route considered as a transient route is avoided being advertised as a preferred route.